WTandDA

@Slip–1

Q.1)WriteaPHPscripttokeeptrackofnumberoftimesthewebpagehasbeenaccessed(Use Session Tracking).

Ans:

```
<?php
Session_start();

If(isset($_SESSION['pcount'])){
  $_SESSION['pcount']+=1;
}else{
  $_SESSION['pcount]=1;
}

Echo"Youhavevisitedthispage".$_SESSION['pcount]."Time(s).";
?>
```

Q.2)Create'Position_Salaries'Dataset.Buildalinearregressionmodelbyidentifying independentand Targetvariable.Splitthevariablesintotrainingandtestingsets.Thendividethetrainingand testingsets Intoa7:3ratio,respectivelyandprintthem.Buildasimplelinearregressionmodel.

Ans:

```
Importnumpyasnp
Importpandasaspd
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression

#CreatethePosition_Salariesdataset
Data={'Position':['CEO','charman','director','SeniorManager','JuniorManager','Intern'],
      'Level':[1,2,3,4,5,6],
      'Salary':[50000,80000,110000,150000,200000,250000]}
Df=pd.DataFrame(data)

#Identifytheindependentandtargetvariables
X=df.iloc[:,1:2].values
Y=df.iloc[:,2].values

#Splitthevariablesintotrainingandtestingsetswitha7:3ratio
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.3,random_state=0)

#Printthetrainingandtestingsets
Print("X_train:\n",X_train)
Print("y_train:\n",y_train)
Print("X_test:\n",X_test)
Print("y_test:\n",y_test)

#Buildasimplelinearregressionmodel
Regressor=LinearRegression() Regressor.fit(X_train,y_train)

#Printthecoefficientsandintercept
Print("Coefficients:",regressor.coef_)
Print("Intercept:",regressor.intercept_)
```

Edit with WPS Office

@Slip-2

Q.1WriteaPHPscripttochangetheprefrencesofyourwebpagelikefontstyle,fontsize,font color, Backgroundcolorusingcookie.Displayselectedsettingonnextwebpageandactual implementation (withnewsettings)onthirdpage(UseCookies).

Ans:

```
Fristpage.html

<!DOCTYPEhtml>
<html>
<head>
        <title>Changeprefrences</title>
</head> <body>

        <h1>Changeprefrences</h1>
        <formaction="secondpage.php"method="post">
                <labelfor="fontstyle">FontStyle:</label>
                <selectname="fontstyle"id="fontstyle">
                        <optionvalue="Arial">Arial</option>
                        <optionvalue="TimesNewRoman">TimesNewRoman</option>
                        <optionvalue="Verdana">Verdana</option>
                </select><br><br>
                <labelfor="fontsize">FontSize:</label>
                <selectname="fontsize"id="fontsize">
                                <optionvalue="12">12</option>
                                <optionvalue="14">14</option>
                                <optionvalue="16">16</option>
                </select><br><br>
                <labelfor="fontcolor">FontColor:</label>
                <inputtype="color"name="fontcolor"id="fontcolor"><br><br>
                <labelfor="bgcolor">BackgroundColor:</label>
                <inputtype="color"name="bgcolor"id="bgcolor"><br><br>
                <inputtype="submit"name="submit"value="Save">
        </form>
</body>
</html>

Secondpage.php

<?php
If(isset($_POST['submit'])){
        $fontstyle=$_POST['fontstyle'];
        $fontsize=$_POST['fontsize'];
        $fontcolor=$_POST['fontcolor'];
        $bgcolor=$_POST['bgcolor'];

        //Setthecookievalues
        Setcookie('fontstyle',$fontstyle,time()+86400);
        Setcookie('fontsize',$fontsize,time()+86400);
        Setcookie('fontcolor',$fontcolor,time()+86400);
        Setcookie('bgcolor',$bgcolor,time()+86400);
        //Redirectthenextpage
        Header('Location:thirdpage.php');
        Exit();
}
?>

Thirdpage.php

<?php
//Retrievethecookievalues
$fontstyle=isset($_COOKIE['fontstyle'])?$_COOKIE['fontstyle']:'Arial';
$fontsize=isset($_COOKIE['fontsize'])?$_COOKIE['fontsize']:'12';
$fontcolor=isset($_COOKIE['fontcolor'])?$_COOKIE['fontcolor']:'#000000';
$bgcolor=isset($_COOKIE['bgcolor'])?$_COOKIE['bgcolor']:'#FFFFFF';
?>

<!DOCTYPEhtml>
<html>
<head>
        <title>Pagewithnewsettings</title>
        <styletype="text/css">
                Body{
                        Font-family:<?phpecho$fontstyle?>;
                        Font-size:<?phpecho$fontsize?>px;
                        Color:<?phpecho$fontcolor?>;
                Background-color:<?phpecho$bgcolor?>;
                }
        </style>
</head> <body>

        <h1>Pagewithnewsettings</h1>
        <p>Thisisthepagewiththenewsettings.Thefontstyleis<?phpecho$fontstyle?>,the fontsizeis<?phpecho$fontsize?>px,thefontcoloris<?phpecho$fontcolor?>,andthe backgroundcoloris<?phpecho$bgcolor?>.</p>
</body>
</html>
```

Edit with WPS Office

Q.2)Create'Salary'Dataset.Buildalinearregressionmodelbyidentifyingindependentand target Ariable.Splitthevariablesintotrainingandtestingsetsandprintthem.Buildasimplelinear regression Delforpredictingpurchases.

Ans:

```
Importnumpyasnp
Importpandasaspd
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression

#CreatetheSalarydataset
Data={'YearsExperience':[1,2,3,4,5,6,7,8,9,10],
      'Salary':[50000,60000,70000,80000,90000,100000,110000,120000,130000,140000]}
Df=pd.DataFrame(data)

#Identifytheindependentandtargetvariables
X=df.iloc[:,0:1].values
Y=df.iloc[:,1].values

#Splitthevariablesintotrainingandtestingsets
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.3,random_state=0)

#Printthetrainingandtestingsets
Print("X_train:\n",X_train)
Print("y_train:\n",y_train)
Print("X_test:\n",X_test)
Print("y_test:\n",y_test)

#Buildasimplelinearregressionmodel
Regressor=LinearRegression() Regressor.fit(X_train,y_train)

#Printthecoefficientsandintercept
Print("Coefficients:",regressor.coef_)
Print("Intercept:",regressor.intercept_)
```

Edit with WPS Office

@Slip-3

Q.1)WriteaPHPscripttoacceptusernameandpassword.Ifinthefirstthreechances, usernameand Passwordenteredscorrectthendisplaysecondformwith"Welcomemessage"otherwise displayerror Message.[UseSession]

.

Ans:

```
<?php
//Startsession
Session_start();

//Checkifloginformhasbeensubmitted
If(isset($_POST['submit'])){
  //Getusernameandpasswordinputfromuser
  $username=$_POST['username'];
  $password=$_POST['password'];

  //Setcorrectusernameandpassword
  $correct_username='myusername';
  $correct_password='mypassword';

  //Checkifenteredusernameandpasswordarecorrect
  If($username==$correct_username&&$password==$correct_password){
   //Setsessionvariabletomarkuserasloggedin $_SESSION['loggedin']=true;

   //Redirectusertowelcomepage
   Header('Location:welcome.php');
   Exit;
  }else{
   //Decrementloginattempts
   If(isset($_SESSION['attempts'])){
    $_SESSION['attempts']--;
   }else{
    $_SESSION['attempts']=3;
   }

   //Displayerrormessageifmaximumloginattemptsexceeded
   If($_SESSION['attempts']<=0){
    Echo"Maximumloginattemptsexceeded.Pleasetryagainlater.";
   }else{
    //Displayerrormessage
    Echo"Invalidusernameorpassword.Youhave".$_SESSION['attempts']."Attempt(s)left.";
   }
  }
}
?>
```

Edit with WPS Office

```
<!—HTMLformforuserinput
<formmethod="post">
  <labelfor="username">Username:</label>
  <inputtype="text"id="username"name="username"required><br><br>

  <labelfor="password">Password:</label>
  <inputtype="password"id="password"name="password"required><br><br>

  <inputtype="submit"name="submit"value="LogIn">
</form>
```

Q.2)Create'User'Datasethaving5columnsnamely:UserID,Gender,Age,EstimatedSalaryand urchased.Buildalogisticregressionmodelthatcanpredictwhetheronthegivenparametera personwillbuyacarornot.

Ans:

```
Importpandasaspd

Data={'UserID':[1,2,3,4,5,6,7,8,9,10],
      'Gender':['Male','Male','Female','Female','Male','Male','Female','Female','Male','Female'],
      'Age':[19,35,26,27,19,27,32,25,33,45],
      'EstimatedSalary':[19000,20000,43000,57000,76000,58000,82000,32000,69000, 65000],
      'Purchased':[0,0,0,1,1,0,1,0,1,1]}
Df=pd.DataFrame(data)

Fromsklearn.model_selectionimporttrain_test_split

X=df.iloc[:,1:4].values
Y=df.iloc[:,4].values

X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.3,random_state=0)
Fromsklearn.linear_modelimportLogisticRegression

Lr=LogisticRegression(random_state=0) Lr.fit(X_train,y_train)
```

Edit with WPS Office

```
#Predictasingleobservation
Observation=[[0,30,87000]]
Prediction=Lr.predict(observation)
Print(prediction)


#Predictmultipleobservations
Observations=[[0,30,87000],[1,50,45000],[1,22,30000]]
Predictions=Lr.predict(observations)
Print(predictions)
```

@Slip-4

Q.1)WriteaPHPscripttoacceptEmployeedetails(Eno,Ename,Address)onfirstpage.On second Pageacceptearning(Basic,DA,HRA).Onthirdpageprint Employeeinformation(Eno,Ename, Address, Basic,DA,HRA,Total)[UseSession]

.

Ans:

Firstpage.php

```
<?php
Session_start();
?>

<!DOCTYPEhtml>
<html>
<head>
        <title>EmployeeDetails</title>
</head> <body>

        <h1>EmployeeDetails</h1>
        <formmethod="POST"action="Secondpage.php">
        <labelfor="eno">EmployeeNo:</label>
        <inputtype="text"id="eno"name="eno"><br><br>
        <labelfor="ename">EmployeeName:</label>
        <inputtype="text"id="ename"name="ename"><br><br>
        <labelfor="address">Address:</label>
        <textareaid="address"name="address"></textarea><br><br>
        <inputtype="submit"value="Next">
    </form>
</body>
</html>
```

Edit with WPS Office

```
<?php
//Storeemployeedetailsinsession
If(isset($_POST['eno'])&&isset($_POST['ename'])&&isset($_POST['address'])){
        $_SESSION['eno']=$_POST['eno'];
        $_SESSION['ename']=$_POST['ename'];
        $_SESSION['address']=$_POST['address'];
}
?>
```

Secondpage.php

```
<?php
Session_start();
?>

<!DOCTYPEhtml>
<html>
<head>
        <title>Earnings</title>
</head> <body>

        <h1>Earnings</h1>
        <formmethod="POST"action="thirdpage.php">
        <labelfor="basic">Basic:</label>
        <inputtype="text"id="basic"name="basic"><br><br>
        <labelfor="da">DA:</label>
        <inputtype="text"id="da"name="da"><br><br>
        <labelfor="hra">HRA:</label>
        <inputtype="text"id="hra"name="hra"><br><br>
        <inputtype="submit"value="Next">
    </form>
</body>
</html>
```

Edit with WPS Office

```
<?php
//Storeearningsinsession
If(isset($_POST['basic'])&&isset($_POST['da'])&&isset($_POST['hra'])){
        $_SESSION['basic']=$_POST['basic'];
        $_SESSION['da']=$_POST['da'];
        $_SESSION['hra']=$_POST['hra'];
}
?>
```

Thirdpage.php

```
<?php
Session_start();

//Calculatetotalearnings
$total=$_SESSION['basic']+$_SESSION['da']+$_SESSION['hra'];
?>

<!DOCTYPEhtml>
<html>
<head>
        <title>EmployeeInformation</title>
</head> <body>

        <h1>EmployeeInformation</h1>
        <p><strong>EmployeeNo:</strong><?phpecho$_SESSION['eno'];?></p>
        <p><strong>EmployeeName:</strong><?phpecho$_SESSION['ename'];?></p>
        <p><strong>Address:</strong><?phpecho$_SESSION['address'];?></p>
        <p><strong>Basic:</strong><?phpecho$_SESSION['basic'];?></p>
        <p><strong>DA:</strong><?phpecho$_SESSION['da'];?></p>
        <p><strong>HRA:</strong><?phpecho$_SESSION['hra'];?></p>
        <p><strong>TotalEarnings:</strong><?phpecho$total;?></p>
</body>
</html>
```

Edit with WPS Office

Q.2)Builadasimplelinearregressionmodelforfish SpeciesWeightPrediction.

Ans:

```
Importpandasaspd
Importrandom
Fromsklearn.linear_modelimportLinearRegression

#createthedataset
Fish_species=['Tuna','Salmon','Trout','Bass','Sardine','Cod','Mackerel']
Weights=[]

Foriinrange(50):
    Fish_weight=[]
    Forjinrange(7):
        Weight=random.randint(1,20)
        Fish_weight.append(weight)
    Weights.append(fish_weight)

Df=pd.DataFrame(weights,columns=fish_species)
```

Edit with WPS Office

```
#createthelinearregressionmodel
X=df.iloc[:,:-1]#independentvariables
Y=df.iloc[:,-1]#targetvariable

Model=LinearRegression() Model.fit(X,y)


#predicttheweightofanewfishspecies
New_fish=[[10,12,15,7,4,8]]#exampleinput
Predicted_weight=model.predict(new_fish)
Print("Predictedweight:",predicted_weight)
```

@Slip-5

Q.1)CreateXMLfilenamed"Item.xml"withitem-name,item-rate,itemquantityStorethedetails of5 ItemsofdifferentTypes.

Ans:

Item.xml

```
<items>
  <itemtype="Electronics">
    <name>Television</name>
    <rate>500</rate>
    <quantity>10</quantity>
  </item>
  <itemtype="Clothing">
    <name>Shirt</name>
    <rate>50</rate>
    <quantity>20</quantity>
  </item>
  <itemtype="Grocery"> <name>Rice</name>
    <rate>40</rate>
    <quantity>30</quantity>
  </item>
  <itemtype="Books">
    <name>HarryPotterandthePhilosopher'sStone</name>
    <rate>20</rate>
    <quantity>50</quantity>
  </item>
  <itemtype="Sports">
    <name>Football</name>
    <rate>100</rate>
    <quantity>5</quantity>
  </item> </items>
```

Edit with WPS Office

Q.2)Usetheirisdataset.WriteaPythonprogramtoviewsomebasicstatisticaldetailslike percentile, Mean,stdetc.Ofthespeciesof'Iris-setosa','Iris-versicolor'and'Iris-virginica'.Applylogistic regression Onthedatasettoidentifydifferentspecies(setosa,versicolor,verginica)ofirisflowersgiven just4 Features:sepalandpetallengthsandwidths..Findtheaccuracyofthemodel.

Ans:

```
Importpandasaspd
Fromsklearn.datasetsimportload_iris
Fromsklearn.linear_modelimportLogisticRegression
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.metricsimportaccuracy_score

#loadtheirisdataset Iris=load_iris()

#createadataframefromthedataset
Df=pd.DataFrame(iris.data,columns=iris.feature_names)
Df['target']=iris.target
#viewbasicstatisticaldetailsofthedifferentspecies
Print("Statisticaldetailsofiris-setosa:")
Print(df[df['target']==0].describe())
```

Edit with WPS Office

```
Print("Statisticaldetailsofiris-versicolor:")
Print(df[df['target']==1].describe())

Print("Statisticaldetailsofiris-virginica:")
Print(df[df['target']==2].describe())

#splitthedataintotrainingandtestingsets
X=df.iloc[:,:-1]
Y=df.iloc[:,-1]
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2,random_state=42)

#fitalogisticregressionmodel
Logreg=LogisticRegression() Logreg.fit(X_train,y_train)

#makepredictionsonthetestset Y_pred=logreg.predict(X_test)

#calculatetheaccuracyofthemodel
Accuracy=accuracy_score(y_test,y_pred)
Print("Accuracyofthelogisticregressionmodel:",accuracy)
```

@Slip-6

Q.1)WritePHPscripttoread"book.xml"fileintosimpleXMLobject.Displayattributesand elements. (simple_xml_load_file()function)

.

Ans:

```
<?php
//LoadtheXMLfileintoaSimpleXMLobject $xml=simplexml_load_file("book.xml");

//Displaytheattributesandelementsoftheabove SimpleXMLobject
Echo"Bookattributes:<br>";
Echo"ISBN:".$xml['isbn']."<br>";
Echo"Publisher:".$xml['publisher']."<br>"; Echo"<br>";

Echo"Bookelements:<br>";
Echo"Title:".$xml->title."<br>";
Echo"Author:".$xml->author."<br>";
Echo"Description:".$xml->description."<br>";
?>

Book.xmlfile

<?xmlversion="1.0"?>
<bookisbn="978-3-16-148410-0"publisher="ExamplePublisher">
  <title>ExampleBook</title>
  <author>JohnDoe</author>
  <description>Thisisanexamplebook.</description>
</book>
```

Edit with WPS Office

Q.2)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat Teprocesswithdifferentmin_supvalues.

TID={1:["bread","milk"],2=["bread","diaper","beer","eggs"],3=["milk","diaper","beer","coke"],4=["bread","milk","diaper","beer"],5=["bread","milk","diaper","coke"]}

Ans:

```
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules

#createthedataset
TID=
```

Edit with WPS Office

```
{1:["bread","milk"],2:["bread","diaper","beer","eggs"],3:["milk","diaper","beer","coke"],4:["bread","mil
k","diaper","beer"],5:["bread","milk","diaper","coke"]}
Transactions=[]
Forkey,valueinTID.items():
    Transactions.append(value)

#convertthecategoricalvaluesintonumericformat
Te=TransactionEncoder()
Te_ary=te.fit_transform(transactions)
Df=pd.DataFrame(te_ary,columns=te.columns_) #applytheapriorialgorithmwithdifferentmin_supvalues
Min_sup_values=[0.2,0.4,0.6]
Formin_supinmin_sup_values:
    Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)
    Rules=association_rules(frequent_itemsets,metric="confidence",min_threshold=0.7)
    Print("Min_sup:",min_sup)
    Print("FrequentItemsets:")
    Print(frequent_itemsets)
    Print("AssociationRules:")
    Print(rules)



@Slip-7

Q.1)WriteaPHPscripttoread"Movie.xml"fileandprintallMovieTitleandActorNameoffile using
OMDocumentParser."Movie.xml"fileshouldcontainfollowinginformationwithatleast5 records
Wthvalues.MvieInfoMovieNo,MovieTitle,ActorName,ReReleaseYear.
Ans:

Phpfile

<?php
//LoadtheXMLfile
```

Edit with WPS Office

```
$xml=newDOMDocument();
$xml->load('Movie.xml');
//Getallthemovienodes
$movies=$xml->getElementsByTagName('MovieInfo');

//Loopthrougheachmovienodeandprintthemovietitleandactorname

Foreach($moviesas$movie){
    Echo"MovieTitle:".$movie->getElementsByTagName('MovieTitle')[0]->textContent.",";
    Echo"ActorName:".$movie->getElementsByTagName('ActorName')[0]->textContent."<br>";
}
?>



XMLfile

<?xmlversion="1.0"?>
<MovieList>
    <MovieInfo>
        <MovieNo>1</MovieNo>
        <MovieTitle>TheShawshankRedemption</MovieTitle>
        <ActorName>TimRobbins</ActorName>
        <ReleaseYear>1994</ReleaseYear>
    </MovieInfo>
    <MovieInfo>
        <MovieNo>2</MovieNo>
        <MovieTitle>TheGodfather</MovieTitle>
        <ActorName>MarlonBrando</ActorName>
        <ReleaseYear>1972</ReleaseYear>
    </MovieInfo>
    <MovieInfo>
        <MovieNo>3</MovieNo>
        <MovieTitle>TheDarkKnight</MovieTitle>
```

Edit with WPS Office

```
        <ActorName>ChristianBale</ActorName>
        <ReleaseYear>2008</ReleaseYear>
    </MovieInfo>
    <MovieInfo>
        <MovieNo>4</MovieNo>
        <MovieTitle>TheGodfather:PartII</MovieTitle>
        <ActorName>AlPacino</ActorName>
        <ReleaseYear>1974</ReleaseYear>
    </MovieInfo>
    <MovieInfo>
        <MovieNo>5</MovieNo>
        <MovieTitle>12AngryMen</MovieTitle>
        <ActorName>HenryFonda</ActorName>
        <ReleaseYear>1957</ReleaseYear>
    </MovieInfo>
</MovieList>



Q.2)DownloadtheMarketbasketdataset.Writeapythonprogramtoreadthedatasetand displayits
Information.Preprocessthedata(dropnullvaluesetc.)Convertthecategoricalvaluesinto numeric
Format.Applytheapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsand association Rules..

Ans:
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules

#readthedataset
Df=pd.read_csv('Market_Basket_Optimisation.csv',header=None)

#dropnullvalues
Df.dropna(inplace=True)
```

Edit with WPS Office

```
#convertcategoricalvaluestonumericusingone-hotencoding
Te=TransactionEncoder()
Te_ary=te.fit(df.values).transform(df.values)
Df=pd.DataFrame(te_ary,columns=te.columns_)

#generatefrequentitemsetsusingapriorialgorithm
Frequent_itemsets=apriori(df,min_support=0.01,use_colnames=True)

#generateassociationrulesfromfrequentitemsets
Rules=association_rules(frequent_itemsets,metric="lift",min_threshold=1)

#displayinformation
Print("OriginalDataset:\n")
Print(df.head())
Print("\nFrequentItemsets:\n")
Print(frequent_itemsets)
Print("\nAssociationRules:\n")
Print(rules)
@Slip-8

Q.1)WriteaJavaScripttodisplaymessage'Examsarenear,haveyoustartedpreparingfor?' (usealert
Box)andAcceptanytwonumbersfromuseranddisplayadditionoftwonumber.(UsePrompt and Confirmbox) AAAns:

//Displaymessageusingalertbox
Alert('Examsarenear,haveyoustartedpreparingfor?');

//Accepttwonumbersfromuserusingpromptandconfirmboxes
Letnum1=prompt('Enterfirstnumber:');
Letnum2=prompt('Entersecondnumber:');
LetconfirmMsg=`Areyousureyouwanttoadd${num1}and${num2}?`;

//Showconfirmationmessagetouserusingconfirmbox
LetconfirmResult=confirm(confirmMsg);
```

Edit with WPS Office

```
//Ifuserconfirms,thenperformadditionanddisplaytheresult
If(confirmResult){
  Num1=parseInt(num1);
  Num2=parseInt(num2);
  Letsum=num1+num2;
  Alert(`Thesumof${num1}and${num2}is${sum}.`);
}

Q.2)Downloadthegroceriesdataset.Writeapythonprogramtoreadthedatasetanddisplayits
Information.Preprocessthedata(dropnullvaluesetc.)Convertthecategoricalvaluesinto numeric
Format.Applytheapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsand association Rules.
Ans:

Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules

#Loadthedataset
Df=pd.read_csv('market_basket.csv')

#Dropanyrowswithnullvalues Df.dropna(inplace=True)

#Convertcategoricalvaluestonumericformat
Te=TransactionEncoder()
Te_ary=te.fit(df.values).transform(df.values)
Df=pd.DataFrame(te_ary,columns=te.columns_)

#Generatefrequentitemsets
Frequent_itemsets=apriori(df,min_support=0.01,use_colnames=True)

#Generateassociationrules
Rules=association_rules(frequent_itemsets,metric="lift",min_threshold=1)
```

Edit with WPS Office

```
#Displayinformationaboutthedataset
Print("Datasetinformation:")
Print(df.info())

#Displaythefrequentitemsets
Print("\nFrequentitemsets:")
Print(frequent_itemsets)

#Displaytheassociationrules
Print("\nAssociationrules:")
Print(rules)



@Slip-9

Q.1)WriteaJavaScriptfunctiontovalidateusernameandpasswordforamembershipform.
Ans:

FunctionvalidateForm(){
  //Gettheusernameandpasswordinputvalues
  Varusername=document.forms["membershipForm"]["username"].value;
  Varpassword=document.forms["membershipForm"]["password"].value;

  //Validateusername
  If(username==""){
    Alert("Usernamemustbefilledout");
    Returnfalse;
  }

  //Validatepassword
  If(password==""){
    Alert("Passwordmustbefilledout");
    Returnfalse;
```

Edit with WPS Office

```
  }

  //Returntrueifbothusernameandpasswordarevalid Returntrue;
}



Q.2)Createyourowntransactionsdatasetandapplytheaboveprocessonyourdataset.
Ans:

Items=['item1','item2','item3','item4']

Transactions=[['item1','item2','item3'],
    ['item2','item3'],
    ['item1','item2','item4'],
    ['item1','item4'],
    ['item2','item3','item4'],
    ['item1','item3','item4'],
    ['item1','item2'],
    ['item1','item3'],
    ['item3','item4'],
    ['item2','item4']
]

Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules #Convertthetransactionsintoabinarymatrix
Te=TransactionEncoder()
Te_ary=te.fit_transform(transactions)

#Convertthebinarymatrixintoapandasdataframe
Df=pd.DataFrame(te_ary,columns=te.columns_)

#Generatefrequentitemsetswithaminimumsupportof0.3
Frequent_itemsets=apriori(df,min_support=0.3,use_colnames=True)

#Generateassociationruleswithaminimumconfidenceof0.7
Association_rules=association_rules(frequent_itemsets,metric="confidence", min_threshold=0.7)

#Printthefrequentitemsetsandassociationrules
Print(frequent_itemsets)
Print(association_rules)


@Slip-10


Q.1)CreateaHTMLfiletoinserttextbeforeandafteraParagraphusingjQuery.[Hint:Use before() Andafter()].
Ans:

<!DOCTYPEhtml>
<html>
<head>
        <title>InserttextbeforeandafterparagraphusingjQuery</title>
        <scriptsrc=https://code.jquery.com/jquery-3.6.0.min.js></script>
</head> <body>

        <h1>InserttextbeforeandafterparagraphusingjQuery</h1>

        <p>Thisisaparagraph.</p>

        <script>
                $(document).ready(function(){
                        $("p").before("Textinsertedbeforetheparagraph.");
                $("p").after("Textinsertedaftertheparagraph."); });

        </script>
</body>
```

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```
</html>
```

Q.2).Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply
Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat
Theprocesswithdifferentmin_supvalues.
TID=[1:["eggs","milk","bread"],2=["eggs","apple"],3=["milk","bread"],4=["apple","milk"],5=["milk","ap ple","bread"]}
Ans:

```
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules

#Createthedataset
Dataset={
    1:["eggs","milk","bread"],
    2:["eggs","apple"],
    3:["milk","bread"],
    4:["apple","milk"],
    5:["milk","apple","bread"]
}

#Convertcategoricalvaluesintonumericformat
Te=TransactionEncoder()
Te_ary=te.fit(dataset.values()).transform(dataset.values()) Df=pd.DataFrame(te_ary,columns=te.columns_)


#ApplyApriorialgorithmtogeneratefrequentitemsetsandassociationrules
Min_sup=0.4
Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)
Association_rules=association_rules(frequent_itemsets,metric="confidence", min_threshold=0.6)
```

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```
#Printthefrequentitemsetsandassociationrules Print("FrequentItemsets:\n",frequent_itemsets)
Print("\nAssociationRules:\n",association_rules)
```

@Slip-11

Q.1)WriteaJavascriptprogramtoacceptnameofstudent,changefontcolortored,fontsize to18if
Studentnameispresentotherwiseonclickingonemptytextboxdisplayimagewhichchanges itssize
(Useonblur,onload,onmousehover,onmouseclick,onmouseup) Ans:

```
<!DOCTYPEhtml>
<html>
<head>
        <title>JavaScriptExample</title> <style>

                #name{
                        Font-size:14px;
                        Color:black;
                }
        </style>
</head> <body>

        <inputtype="text"id="name"onblur="changeStyle()"onmouseover="changeSize()"
onmouseout="resetSize()"onmousedown="changeColor()"onmouseup="resetColor()">
                        <imgid="img"src=https://via.placeholder.com/150onload="changeImageSize()">


        <script>
                FunctionchangeStyle(){
                        Letname=document.getElementById("name").value;
                        If(name){
                                                Document.getElementById("name").style.fontSize="18px";
                                Document.getElementById("name").style.color="red";
                        }else{
                                                Document.getElementById("img").style.display="block";
                        }
```

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```
                }

                FunctionchangeSize(){
                        Document.getElementById("name").style.fontSize="16px";
                }

                FunctionresetSize(){
                        Document.getElementById("name").style.fontSize="14px";
                }

                FunctionchangeColor(){
                        Document.getElementById("name").style.color="blue";
                }

                FunctionresetColor(){
                        Document.getElementById("name").style.color="red";
                }

                FunctionchangeImageSize(){
                        Document.getElementById("img").style.width="200px";
                        Document.getElementById("img").style.height="200px";
                }
        </script>
</body>
</html>
```

Q.2).Createtheabovedatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply
Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsand associationrules.Repeat
Theprocesswithdifferentmin_supvalues.

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```
TID=[1:["butter","bread","milk],2=["butter","flour","milk","suger"],3=["butter","eggs","milk","salt"],4=
["eggs"],5=["butter","flour","milk","salt"]}
```

Ans:

```
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules

#Creatingthedataset
Dataset=[['butter','bread','milk'],['butter','flour','milk','sugar'],['butter','eggs','milk','salt'],
['eggs'],['butter','flour','milk','salt']]
Df=pd.DataFrame(dataset)

#Convertingthecategoricalvaluesintonumericformat
Te=TransactionEncoder()
Te_ary=te.fit(dataset).transform(dataset)
Df=pd.DataFrame(te_ary,columns=te.columns_)

#GeneratingfrequentitemsetsusingApriorialgorithmwithdifferentmin_supvalues
Min_sup_values=[0.4,0.3,0.2]
Formin_supinmin_sup_values:
    Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)
    Print("FrequentItemsetswithminimumsupportof",min_sup)
    Print(frequent_itemsets)

    #Generatingassociationrules
    Rules=association_rules(frequent_itemsets,metric="confidence",min_threshold=0.7)
    Print("AssociationRuleswithminimumsupportof",min_sup) Print(rules)
```

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@Slip-12

Q.1)WriteAJAXprogramtoreadcontact.datfileandprintthecontentsofthefileinatabular format
Whentheuserclicksonprintbutton.Contact.datfileshouldcontainsrno,name,residence number,
Mobilenumber,Address.[Enteratleast3recordincontact.datfile]
.

Ans:
Htmlfile

```
<<!DOCTYPEhtml>
<html>
<head>
        <title>ContactList</title>
        <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>
        <scriptsrc="script.js"></script>

</head> <body>

        <buttonid="printBtn">PrintContacts</button>
        <br><br>
        <tableid="contactTable"> <thead>

                        <tr>
                                <th>Sr.No.</th>
                                <th>Name</th>
                                        <th>ResidenceNumber</th>
                                <th>MobileNumber</th>
                                <th>Address</th>
                        </tr>
                </thead> <tbody>

                        <!—Contactlistwillbedisplayedhere!!
                </tbody>
```

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```
        </table>
</body>
</html>
Ajaxfile


$(document).ready(function(){
        //Eventlistenerforprintbutton $("#printBtn").click(function(){

                //AJAXrequesttoreadcontact.datfile
                $.ajax({ url:"contact.dat", dataType:"text",
                        success:function(data){

                                        //Splitthefilecontentsintolines
                                Varlines=data.split("\n");


                                        //Iterateovereachlineandcreateatablerow
                                VartableRows="";
                                        For(vari=0;i<lines.length;i++){
                                        Varcolumns=lines[i].split(",");
                                If(columns.length==5){//Onlyprocessvalidrows tableRows+="<tr>";
                                        for(varj=0;j<columns.length;j++){
                                        tableRows+="<td>"+columns[j]+"</td>";

                                                }
                                        tableRows+="</tr>";
                                }
                        }


                                //Addthetablerowstothetablebody
                                $("#contactTabletbody").html(tableRows);
                        },
                                Error:function(jqXHR,textStatus,errorThrown){
                                        Alert("Error:"+errorThrown);
                        }
});
```

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```
        });
});
```

Q.2)Create'heights-and-weights'Dataset.Buildalinearregressionmodelbyidentifying independent
Andtargetvariable.Splitthevariablesintotrainingandtestingsetsandprintthem.Builda simplelinear
Regressionmodelforpredictingpurchases.

Ans:

```
Importnumpyasnp
Importpandasaspd
Fromsklearn.linear_modelimportLinearRegression
Fromsklearn.model_selectionimporttrain_test_split

#Createarandomdatasetwith10samples
Heights=np.random.normal(170,10,10)
Weights=np.random.normal(70,5,10)

#Combinethetwoarraysintoasingledataset
Dataset=pd.DataFrame({'Height':heights,'Weight':weights}) #Splitthedatasetintotrainingandtestingsets
X_train,X_test,y_train,y_test=train_test_split(dataset['Height'],dataset['Weight'],test_size=0.2, random_state=42)

#CreateaLinearRegressionmodelandfitittothetrainingdata
Lr_model=LinearRegression()
Lr_model.fit(X_train.values.reshape(-1,1),y_train)

#Printthemodelcoefficients
Print('ModelCoefficients:',lr_model.coef_)

#Predicttheweightsforthetestdataandprintthepredictions
Y_pred=lr_model.predict(X_test.values.reshape(-1,1))
```

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```
Print('Predictions:',y_pred)
```

@Slip-13

Q.1)WriteAJAXprogramwheretheuserisrequestedtowritehisorhernameinatextbox,and the
Serverkeepssendingbackresponseswhiletheuseristyping.Iftheusernameisnotentered thenthe
Messagedisplayedwillbe,"Stranger,pleasetellmeyourname!".IfthenameisRohit,Virat, Dhoni,
AshwinorHarbhajan,theserverrespondswith"Hello,master!".Ifthenameisanythingelse, the
Messagewillbe",Idon'tknowyou!".

Ans:
Htmlfile

```
<!DOCTYPEhtml>
<html>
<head>
        <title>AJAXProgram</title>
        <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>
</head> <body>

        <labelfor="name">Enteryourname:</label>
        <inputtype="text"id="name"name="name">
        <divid="response"></div>

        <scriptsrc="ajax.js"></script>
</body>
</html>
```

Ajaxfile

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```
$(document).ready(function(){
    //Attachaneventlistenertothenameinputfield $('#name').on('input',function(){

        //Getthenameenteredbytheuser Varname=$(this).val();


        //SendanAJAXrequesttotheserver
        $.ajax({
            url:'server.php', type:'POST',
            data:{name:name}, success:function(response){

                //Updatetheresponsedivwiththeserver'sresponse
                $('#response').html(response);
            }
        });
    });
});
```

Filename:Server.php

```
<?php

//Getthenameenteredbytheuser
$name=$_POST['name'];

//Checkifthenameisempty
If(empty($name)){
    Echo'Stranger,pleasetellmeyourname!';
}
//Checkifthenameisoneofthemasternames
Elseif($name=='Rohit'||$name=='Virat'||$name=='Dhoni'||$name=='Ashwin'||$name== 'Harbhajan'){
    Echo'Hello,master!';
}
```

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```
//Otherwise,theserverdoesn'tknowtheuser
Else{
    Echo$name.',Idon\'tknowyou!';
}
```

Q.2)Downloadnurserydatasetfrom UCI.Buildalinearregressionmodelbyidentifying independent Andtargetvariable.Splitthevariablesintotrainingandtestingsetsandprintthem.Builda simplelinear Regressionmodelforpredictingpurchases.

Ans:

```
Importpandasaspd
Importnumpyasnp
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression

#Loadthedataset

url=https://archive.ics.uci.edu/ml/machine-learning-databases/nursery/nursery.data
names=['parents','has_nurs','form','children','housing','finance','social','health','class']
dataset=pd.read_csv(url,names=names)

#Identifyindependentandtargetvariables
X=dataset.drop('class',axis=1)
Y=dataset['class']

#Convertcategoricalvariablesintonumericalvariablesusingone-hotencoding
X=pd.get_dummies(X)
#Splitintotrainingandtestingsets
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2,random_state=42)

#Buildalinearregressionmodel
Model=LinearRegression() Model.fit(X_train,y_train)


#Printthecoefficientsofthemodel
Print("Intercept:",model.intercept_)
Print("Coefficients:",model.coef_)

#Predictthetargetvariableforthetestingset
Y_pred=model.predict(X_test)

#EvaluatethemodelusingMeanSquaredError(MSE)
Mse=np.mean((y_test-y_pred)**2)
Print("MSE:",mse)
```

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@Slip-14

Q.1)CreateTEACHERtableasfollowsTEACHER(tno,tname,qualification,salary).WriteAjax Programtoselectateachersnameandprinttheselectedteachersdetails.

AAns:

Jsfile

```
<!DOCTYPEhtml>
<html>
<head>
    <title>TeacherDetails</title>
    <scriptsrc=https://code.jquery.com/jquery-3.6.0.min.js></script>
</head> <body>

    <selectid="teacher-list">
        <optionvalue="">---SelectTeacher---</option>
        <optionvalue="1">JohnDoe</option>
        <optionvalue="2">JaneSmith</option>
                                                    <optionvalue="3">BobJohnson</option>
    </select>
    <buttonid="submit-btn">GetDetails</button>
    <divid="details"></div>

    <script>
        $(document).ready(function(){
                                $('#submit-btn').click(function(){
                            Vartno=$('#teacher-list').val();
                                    If(tno==''){
                                        Alert('Pleaseselectateacher.');
                                    Return;
                            }
                            $.ajax({ url:'teacherdetails.php', method:'POST',
                                data:{tno:tno}, success:function(response){
                                        $('#details').html(response);
                                    },
                                    Error:function(xhr,status,error){
                                        Console.log(xhr.responseText);
                                    }
                            });
                        });
                    });
    </script>
</body>
</html>
```

Phpfileteacherdetails.php

```
<?php
//Connecttodatabase
$servername="localhost";
$username="username";
$password="password";
```

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```
$dbname="database_name";
$conn=mysqli_connect($servername,$username,$password,$dbname);

//Checkconnection
If(!$conn){
  Die("Connectionfailed:".mysqli_connect_error());
}

//Retrieveselectedteacherdetails
If(isset($_POST['tno'])){
    $tno=$_POST['tno'];
    $sql="SELECT*FROMTEACHERWHERETno='$tno'"; $result=mysqli_query($conn,$sql);

    If(mysqli_num_rows($result)>0){
        $row=mysqli_fetch_assoc($result);
        Echo"TeacherName:".$row['tname'].".<br>";
        Echo"Qualification:".$row['qualification'].".<br>";
        Echo"Salary:".$row['salary'].".<br>";
    }else{
        Echo"Nodatafound.";
    }
}

//Closedatabaseconnection
Mysqli_close($conn);
?>
```

Q.2)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat Theprocesswithdifferentmin_sup_values.

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```
TID={1:["apple","mango","banana"],2=["mango","banana",
"cabbage","carrots"],3=["mango","banana","carrots"],4=["mango","carrots"]}AAns:

Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori
#Createthedataset
TID={1:["apple","mango","banana"],
    2:["mango","banana","cabbage","carrots"],
    3:["mango","banana","carrots"],
    4:["mango","carrots"]}

#Convertthecategoricalvaluesintonumericformat
Te=TransactionEncoder()
Te_ary=te.fit([TID[i]foriinTID]).transform([TID[i]foriinTID]) Df=pd.DataFrame(te_ary,columns=te.columns_)

#Applytheapriorialgorithmwithdifferentmin_supvalues
Min_sup_values=[0.25,0.5,0.75] Formin_supinmin_sup_values:

  Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)
  Print("Frequentitemsetswithmin_sup=",min_sup)
  Print(frequent_itemsets)
  Print("\n")

@Slip-15

Q.1)WriteAjaxprogramtofetchsuggestionswhenisuseristypinginatextbox.(eglikegoogle Suggestions.Hintcreatearrayofsuggestionsandmatchingstringwillbedisplayed).

Ans:

<!DOCTYPEhtml>
<html>
<head>
    <title>AJAXAutoSuggestionsExample</title>
```

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```
    <script>
        FunctionfetchSuggestions(str){
            If(str.length==0){
                Document.getElementById("suggestions").innerHTML=""; Return;
            }
            Varsuggestions=["apple","banana","cherry","dates","elderberry","fig",
"grape","honeydew","kiwi","lemon"];
            Varmatches=[];
            For(vari=0;i<suggestions.length;i++){
                If(suggestions[i].toLowerCase().startsWith(str.toLowerCase())){
                    Matches.push(suggestions[i]);
                }
            }
            If(matches.length>0){
                Document.getElementById("suggestions").innerHTML=
matches.join("<br>");
            }else{
                Document.getElementById("suggestions").innerHTML="No
suggestionsfound";
            }
        }
    </script>
</head> <body>

    <inputtype="text"onkeyup="fetchSuggestions(this.value)">
    <divid="suggestions"></div>
</body>
</html>
```

Q.2)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat Theprocesswithdifferentmin_supvalues.

No|Company|model|year

1. Tata. Nexon. 2017
2. MG. Astor. 2021
3. Kia. Seltos. 2019
4. Hyundai. Creta. 2015

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Ans:

```
Importpandasaspd

#Createthedataset
Data={'No':[1,2,3,4],
    'Company':['Tata','MG','Kia','Hyundai'],
    'Model':['Nexon','Astor','Seltos','Creta'],
    'Year':[2017,2021,2019,2015]}

Df=pd.DataFrame(data)

#Convertcategoricalvaluesintonumericformat
Df['Company']=pd.Categorical(df['Company'])
Df['Model']=pd.Categorical(df['Model'])

Df['Company']=df['Company'].cat.codes
Df['Model']=df['Model'].cat.codes

Print(df)
Frommlxtend.frequent_patternsimportapriori
Frommlxtend.frequent_patternsimportassociation_rules

#Generatefrequentitemsetswithmin_sup=0.5
Frequent_itemsets=apriori(df,min_support=0.5,use_colnames=True)
Print(frequent_itemsets)

#Generateassociationruleswithmin_threshold=0.7
Association_rules=association_rules(frequent_itemsets,metric="confidence", min_threshold=0.7)
Print(association_rules)
```

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@Slip-16

Q.1)WriteAjaxprogramtogetbookdetailsfromXMLfilewhenuserselectabookname. CreateXML Fileforstoringdetailsofbook(title,author,year,price).

Ans:

Xmlfilebook_details.xml

```
<books>
    <book>
        <title>TheGreatGatsby</title>
        <author>F.ScottFitzgerald</author>
                                    <year>1925</year>
                                    <price>10.99</price>
    </book> <book>
        <title>ToKillaMockingbird</title>
        <author>HarperLee</author>
                                    <year>1960</year>
                                    <price>8.99</price>
    </book> <book>
                                    <title>1984</title>
        <author>GeorgeOrwell</author>
                                    <year>1949</year>
                                    <price>6.99</price>
    </book> <book>
        <title>PrideandPrejudice</title>
        <author>JaneAusten</author>
                                    <year>1813</year>
                                    <price>7.99</price>
    </book>
</books>
```

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Ajaxfile

```
<!DOCTYPEhtml>
<html>
<head>
        <title>BookDetails</title>
        <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script> <script>
                $(document).ready(function(){
                        $("select").change(function(){
                                Varbook=$(this).val();
                                $.ajax({ url:"book_details.xml", dataType:"xml",
                                        success:function(xml){
                                                $(xml).find('book').each(function(){
                                                        Vartitle=$(this).find('title').text();
                                                If(title==book){
                                                  Varauthor=
$(this).find('author').text();
                                                                Varyear=$(this).find('year').text();
                                                                Varprice=$(this).find('price').text();
                                                        $("#details").html("Author:"+author
+"<br>Year:"+year+"<br>Price:"+price);
                                                }
                                                });
                                        }
                                });
                        });
                });
        </script>
</head> <body>
        <select>
                <option>Selectabook</option>
                <option>TheGreatGatsby</option>
                <option>ToKillaMockingbird</option>
                <option>1984</option>
                <option>PrideandPrejudice</option>
        </select>
        <divid="details"></div>
</body>
</html>
```

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Q.2).Consideranytextparagraph.Preprocessthetexttoremoveanyspecialcharactersand digits. Generatethesummaryusingextractivesummarizationpprocess.

Ans:

```
Importre
Importnltk
Fromnltk.corpusimportstopwords
Fromnltk.tokenizeimportsent_tokenize,word_tokenize Fromheapqimportnlargest


#Sampletextparagraphyoucanwriteanytext

Text="Naturallanguageprocessing(NLP)isasubfieldoflinguistics,computerscience,
informationengineering,andartificialintelligenceconcernedwiththeinteractionsbetween
computersandhumanlanguages,inparticularhowtoprogramcomputerstoprocessand
analyzelargeamountsofnaturallanguagedata.Challengesinnaturallanguageprocessing
frequentlyinvolvespeechrecognition,naturallanguageunderstanding,andnaturallanguage
generation.Thehistoryofnaturallanguageprocessinggenerallystartedinthe1950s,although
workcanbefoundfromearlierperiods."
#Removespecialcharactersanddigits Text=re.sub('[^a-zA-Z]',",text)


#Tokenizethetextintosentences
Sentences=sent_tokenize(text)

#Tokenizeeachsenteceintowordsandremovestopwords
Stop_words=set(stopwords.words('english'))
Words=[]
Forsenteceinsentences:
    Words.extend(word_tokenize(sentence))
Words=[word.lower()forwordinwordsifword.lower()notinstop_words]


#Calculatewordfrequency
Word_freq=nltk.FreqDist(words)

#Calculatesentencescoresbasedonwordfrequency
Sentence_scores={}
Forsenteceinsentences:
   Forwordinword_tokenize(sentence.lower()):
      Ifwordinword_freq:
         Iflen(sentence.split(' '))<30:
            Ifsentencenotinsentence_scores:
             Sentence_scores[sentence]=word_freq[word] Else:

               Sentence_scores[sentence]+=word_freq[word]

#Generatesummarybyselectingtop3sentenceswithhighestscores
Summary_sentences=nlargest(3,sentence_scores,key=sentence_scores.get)
Summary=".join(summary_sentences)

Print(summary)
```

@Slip-17

Q.1)WriteaJavaScriptProgramtoshowHelloGoodMorningmessageonloadeventusing alertbox AnddisplaytheStudentregistrationfrom.

Ans:

```
<!DOCTYPEhtml>
<html>
```

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```
<head>
        <title>StudentRegistrationForm</title> <script>
                Window.onload=function(){
                        Alert("HelloGoodMorning!");
                };
        </script>
</head> <body>
        <h1>StudentRegistrationForm</h1>
        <form>
                <labelfor="name">Name:</label>
                <inputtype="text"id="name"name="name"required><br><br>
                <labelfor="email">Email:</label> <inputtype="email"id="email"name="email"required><br><br>
                <labelfor="phone">Phone:</label>
                <inputtype="tel"id="phone"name="phone"required><br><br>
                <labelfor="address">Address:</label>
                <textareaid="address"name="address"required></textarea><br><br>
                <inputtype="submit"value="Submit">
        </form>
</body>
</html>
```

Q.2)Considertextparagraph.So,keepworking.Keepstriving.Nevergiveup.Falldownseven times,get Upeight.Easeisagreaterthreattoprogressthanhardship.Easeisagreaterthreattoprogress than Hardship.So,keepmoving,keepgrowing,keeplearning.Seeyouatwork.Preprocessthetextto remove Anyspecialcharactersanddigits.Generatethesummaryusingextractivesummarization process. Ans:

```
Importre
Fromnltk.tokenizeimportsent_tokenize

#Textparagraph
Text="So,keepworking.Keepstriving.Nevergiveup.Falldownseventimes,getupeight.Ease
isagreaterthreattoprogressthanhardship.Easeisagreaterthreattoprogressthanhardship.
So,keepmoving,keepgrowing,keeplearning.Seeyouatwork."


#Removespecialcharactersanddigits
Text=re.sub('[^A-Za-z]+',",text)
#Tokenizethesentences
Sentences=sent_tokenize(text)

#Calculatethescoreofeachsentencebasedonthenumberofwords
#Thesentenceswithmorewordswillhaveahigherscore
Scores={}
Forsenteceinsentences:
   Words=sentence.split()
   Score=len(words)
   Scores[sentence]=score

#Sortthesentencesbasedontheirscores
Sorted_sentences=sorted(scores.items(),key=lambdax:x[1],reverse=True)

#Extractthetop2sentenceswiththehighestscoresasthesummary
Summary_sentences=[sentence[0]forsenteceinsorted_sentences[:2]]
Summary="".join(summary_sentences)

#Printthesummary Print(summary)
```

@Slip-18

Q.1)WriteaJavaScriptProgramtoprintFibonaccinumbersononclickevent.

Ans:

```
<!DOCTYPEhtml>
<html>
<head>
        <title>FibonacciNumbers</title>
        <script>
                FunctiongenerateFibonacci(){
                        //Gettheinputvaluefromtheuser
                        Varinput=document.getElementById("inputNumber").value;
                        Varoutput=document.getElementById("output");

                        //Convertheinputtoanumber Varn=parseInt(input);

                        //CreateanarraytostoretheFibonaccisequence
                        Varfib=[];

                        //CalculatetheFibonaccisequenceupton
                        Fib[0]=0;
                        Fib[1]=1;
                        For(vari=2;i<=n;i++){
                                Fib[i]=fib[i-1]+fib[i-2];
                        }

                        //DisplaytheFibonaccisequence
                        Output.innerHTML="Fibonaccisequenceupto"+n+":"+fib.join(",");
                }
        </script>
</head> <body>
        <h1>FibonacciNumbers</h1>
        <p>Enteranumber:</p>
        <inputtype="text"id="inputNumber">
        <buttononclick="generateFibonacci()">GenerateFibonacci</button> <pid="output"></p>
</body>
</html>
```

Q.2)Consideranytextparagraph.Removethestopwords.Tokenizetheparagraphtoextract wordsand Sentences.Calculatethewordfrequencydistributionandplotthefrequencies.Plotthe wordcloudofthe Txt.

Ans:

```
#Installthelibraries
!pipinstallnltkmatplotlibwordcloud

#Importthenecessarymodules
Importnltk
Fromnltk.corpusimportstopwords
Fromnltk.tokenizeimportword_tokenize,sent_tokenize
Fromnltk.probabilityimportFreqDist
Importmatplotlib.pyplotasplt
FromwordcloudimportWordCloud

#Downloadthestopwordscorpus
Nltk.download('stopwords')

#Definethetextparagraph
Text="Loremipsumdolorsitamet,consecteturadipiscingelit.Sedtristiqueanteetvelit
vestibulum,velpharetraorciiaculis.Nullammattisrisusquisauguetincidunthoncus.Morbi
varius,arcuvitaescelerisquelaoreet,magnaestimperdietquam,sitametultricieslectusjustoid
enim.Seddictumsuscipitcommodo.Sedmaximusconsequatrisus,necpharetranibh
interdumquis.Etiamegetquamvelauguedictumdignissimsitametnecelit.Nuncatsapien
dolor.Nullavitaeiaculislorem.Suspendissepotenti.Sednonanteturpis.Morbiconsectetur,
arcuavestibulumsuscipit,mauriserosconvallisnibh,necfeugiatorcienimsitametenim.
Aliquameratvolutpat.Etiamvelnisilidnequeviverradapibusnonnonlectus."

#Tokenizetheparagraphtoextractwordsandsentences
Words=word_tokenize(text.lower())
Sentences=sent_tokenize(text)

#Removethestopwordsfromtheextractedwords
```

```
Stop_words=set(stopwords.words('english'))
Filtered_words=[wordforwordinwordsifword.casefold()notinstop_words]

#Calculatethewordfrequencydistributionandplotthefrequenciesusingmatplotlib
Fdist=FreqDist(filtered_words)
Fdist.plot(30,cumulative=False)
Plt.show()

#Plotthewordcloudofthetextusingwordcloud
Wordcloud=WordCloud(width=800,height=800,
            Background_color='white',
            Stopwords=stop_words,
            Min_font_size=10).generate(text)
#plottheWordCloudimage
Plt.figure(figsize=(8,8),facecolor=None)
Plt.imshow(wordcloud)
Plt.axis("off")
Plt.tight_layout(pad=0)

Plt.show()


@Slip-19


Q.1)WriteaJavaScriptProgramtovalidateusernameandpasswordononSubmitevent.
Ans:

<!DOCTYPEhtml>
<html>
  <head>
    <title>ValidateUserNameandPassword</title>
    <script>
      FunctionvalidateForm(){
```

Edit with WPS Office

```
        Varusername=document.forms["myForm"]["username"].value;
        Varpassword=document.forms["myForm"]["password"].value;

        If(username==""){
          Alert("Usernamemustbefilledout");
          Returnfalse;
        }

        If(password==""){
          Alert("Passwordmustbefilledout");
          Returnfalse;
        }
      }
    </script>
  </head>
  <body>
    <h2>ValidateUserNameandPassword</h2>
    <formname="myForm"onsubmit="returnvalidateForm()"method="post">
      <labelfor="username">Username:</label>
      <inputtype="text"id="username"name="username"><br><br>
      <labelfor="password">Password:</label>
      <inputtype="password"id="password"name="password"><br><br>
      <inputtype="submit"value="Submit">
    </form>
  </body>
</html>


Q.2)Downloadthemovie_review.csvdatasetfromKagglebyusingthefollowinglink
:https://www.kaggle.com/nltkdata/movie-review/version/3?select=movie_review.csvto perform
Sentimentanalysisonabovedatasetandcreateawordcloud.

Ans:
```

Edit with WPS Office

```
Importpandasaspd
FromtextblobimportTextBlob
FromwordcloudimportWordCloud,STOPWORDS
Importmatplotlib.pyplotasplt
#Loadthedataset
Df=pd.read_csv('movie_review.csv')

#AddacolumnforsentimentanalysisusingTextBlob
Df['Sentiment']=df['Review'].apply(lambdax:TextBlob(x).sentiment.polarity)

#Createanewdataframeforpositivereviewsonly Pos_df=df[df['Sentiment']>0.2]


#Createawordcloudforpositivereviews
Wordcloud=WordCloud(width=800,height=800,
            Background_color='white',
            Stopwords=STOPWORDS,
            Min_font_size=10).generate(".join(pos_df['Review']))

#Plotthewordcloud
Plt.figure(figsize=(8,8),facecolor=None)
Plt.imshow(wordcloud)
Plt.axis("off")
Plt.tight_layout(pad=0)

Plt.show()


@Slip-20


Q.1)createastudent.xmlfilecontainingatleast5studentinformation.
Ans:
<?xmlversion="1.0"?>
<students>
```

Edit with WPS Office

```
  <student>
    <name>JohnDoe</name>
    <age>21</age>
    <gender>Male</gender>
    <major>ComputerScience</major>
    <gpa>3.8</gpa>
  </student>
  <student>
    <name>JaneSmith</name>
    <age>19</age>
    <gender>Female</gender>
    <major>Business</major>
    <gpa>3.5</gpa>
  </student>
  <student>
    <name>TomJohnson</name>
    <age>20</age>
    <gender>Male</gender>
    <major>Engineering</major>
    <gpa>3.2</gpa>
  </student>
  <student>
    <name>SaraLee</name>
    <age>22</age>
    <gender>Female</gender>
    <major>Psychology</major> <gpa>3.6</gpa>
  </student>
  <student>
    <name>MikeBrown</name>
    <age>18</age>
    <gender>Male</gender>
    <major>Education</major>
    <gpa>3.4</gpa>
```

Edit with WPS Office

```
  </student> </students>


Q.2)Considertextparagraph."""Helloall,WelcometoPythonProgrammingAcademy.Python
ProgrammingAcademyisaniceplatformtolearnnewprogrammingskills.ItisdifficulttogetenrolledinthisAcademy."""Removethestopwords.
Ans:

Importnltk
Fromnltk.corpusimportstopwords Nltk.download('stopwords')


#Textparagraph
Text="Helloall,WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyisaniceplatformtolearnnewprogrammingskills.ItisdifficulttogetenrolledinthisAcademy."

#Tokenizethetext
Tokens=nltk.word_tokenize(text)
#Removestopwords
Stop_words=set(stopwords.words('english'))
Filtered_tokens=[wordforwordintokensifnotword.lower()instop_words]

#Printthefilteredtokens Print(filtered_tokens)


@Slip-21

Q.1)AddaJavaScriptFileinCodeigniter.TheJavascriptcodeshouldcheckwhetheranumber is
Positiveornegative.

Ans:

Htmlfile
```

Edit with WPS Office

```
<!DOCTYPEhtml>
<html>
  <head>
    <title>NumberCheck</title>
    <scriptsrc="<?phpechobase_url('js/numberCheck.js');?>"></script>
  </head>
  <body>
    <h1>NumberCheck</h1>
    <p>Enteranumbertocheck:</p>
    <inputtype="number"id="num"/>
    <buttononclick="checkNumber(document.getElementById('num').value)">Check</button>
  </body>
</html>

Createisfilechecknumber.js

FunctioncheckNumber(num){
  If(num>0){
    Alert("Thenumberispositive.");
  }elseif(num<0){
    Alert("Thenumberisnegative.");
  }else{
    Alert("Thenumberiszero.");
  }
}


Q.2)Buildasimplelinearregressionmodelfor UserData.
Ans:
Importpandasaspd
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression
Fromsklearn.metricsimportmean_squared_error,r2_score
```

Edit with WPS Office

```
Importmatplotlib.pyplotasplt

#1.Collectdata
Data=pd.read_csv('user_data.csv')

#2.Preprocessdata
Data.dropna(inplace=True)
X=data['age'].values.reshape(-1,1) Y=data['income'].values.reshape(-1,1)

#3.Splitdata
X_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.2,random_state=0)

#4.Trainthemodel
Regressor=LinearRegression() Regressor.fit(x_train,y_train)

#5.Predictvalues
Y_pred=regressor.predict(x_test)

#6.Evaluatemodel
Mse=mean_squared_error(y_test,y_pred)
R2=r2_score(y_test,y_pred)
Print("Meansquarederror:",mse) Print("R-squared:",r2)

#7.Visualizeresults
Plt.scatter(x_test,y_test,color='gray')
Plt.plot(x_test,y_pred,color='red',linewidth=2) Plt.show()


@Slip-22

Q.1)Createatablestudenthavingattributes(rollno,name,class).Usingcodeigniter,connectto the
```

Edit with WPS Office

```
Databaseandinsert5recodesinit.
Ans:

<?php

//EstablishconnectiontoPostgreSQLdatabase
$conn=pg_connect("host=localhostdbname=your_database_nameuser=your_username password=your_password");

//Checkifconnectionwassuccessful
If(!$conn){
  Echo"Connectionfailed.";
  Exit;
}

//Createstudenttable
$query="CREATETABLEstudent(
        RollnoINTEGERPRIMARYKEY,
        NameVARCHAR(50)NOTNULL,
        ClassVARCHAR(10)NOTNULL
      )";
$result=pg_query($conn,$query);

If(!$result){
  Echo"Errorcreatingtable:".pg_last_error($conn);
  Exit;
}else{
  Echo"Tablecreatedsuccessfully.<br>";
}
//Insert5recordsintostudenttable
$insert_query="INSERTINTOstudent(rollno,name,class)
        VALUES(1,'JohnDoe','10A'),
          (2,'JaneSmith','9B'),
                (3,'BobJohnson','11C'),
```

Edit with WPS Office

```
                (4,'SarahLee','12D'),
                (5,'TomBrown','8E')";

$insert_result=pg_query($conn,$insert_query);

If(!$insert_result){
    Echo"Errorinsertingrecords:".pg_last_error($conn);
    Exit;
}else{
    Echo"Recordsinsertedsuccessfully.";
}

//Closedatabaseconnection
Pg_close($conn);

?>
```

Q.2).Consideranytextparagraph.Removethestopwords.

Ans:

```
Importnltk
Fromnltk.corpusimportstopwords Fromnltk.tokenizeimportword_tokenize

#sampletextparagraph
Text="Helloall,WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyis
aniceplatformtolearnnewprogrammingskills.ItisdificulttogetenrolledinthisAcademy."

#tokenizethetextparagraph
Words=word_tokenize(text)

#definestopwords
```

Edit with WPS Office

```
Stop_words=set(stopwords.words('english'))

#removestopwords
Filtered_words=[wordforwordinwordsifword.casefold()notinstop_words]

#joinfilteredwordstoformasentence
Filtered_sentence=''.join(filtered_words)

Print(filtered_sentence)
```

@Slip-23

Q.1)Createatablestudenthavingattributes(rollno,name,class)containingatleast5recodes. Using Codeigniter,displayallitsrecords.

Ans:

```
<?php

//EstablishconnectiontoPostgreSQLdatabase
$conn=pg_connect("host=localhostdbname=your_database_nameuser=your_username password=your_password");

//Checkifconnectionwassuccessful
If(!$conn){
    Echo"Connectionfailed.";
    Exit;
}

//Createstudenttable
$query="CREATETABLEstudent(
        RollnoINTEGERPRIMARYKEY,
        NameVARCHAR(50)NOTNULL,
        ClassVARCHAR(10)NOTNULL
```

Edit with WPS Office

```
    )";
$result=pg_query($conn,$query);

If(!$result){
    Echo"Errorcreatingtable:".pg_last_error($conn);
    Exit;
}else{
    Echo"Tablecreatedsuccessfully.<br>";
}

//Insert5recordsintostudenttable
$insert_query="INSERTINTOstudent(rollno,name,class) VALUES(1,'JohnDoe','10A'),
                (2,'JaneSmith','9B'),
                (3,'BobJohnson','11C'),
                (4,'SarahLee','12D'),
                (5,'TomBrown','8E')";

$insert_result=pg_query($conn,$insert_query);

If(!$insert_result){
    Echo"Errorinsertingrecords:".pg_last_error($conn); Exit;
}else{
    Echo"Recordsinsertedsuccessfully.";
}

//Closedatabaseconnection
Pg_close($conn);

//functiontodisplaydatabaserecords
Functiondisplay_records($table_name){
    //establishconnectiontoPostgreSQLdatabase
```

Edit with WPS Office

```
$conn=pg_connect("host=localhostdbname=your_database_nameuser=your_username password=your_password");

    //checkifconnectionwassuccessful
    If(!$conn){
        Echo"Connectionfailed.";
        Exit;
    }

    //retrieverecordsfromspecifiedtable
    $query="SELECT*FROM".$table_name; $result=pg_query($conn,$query);

    //checkifquerywassuccessful
    If(!$result){
        Echo"Errorretrievingrecords:".pg_last_error($conn); Exit;
    }

    //displayrecordsinanHTMLtable
    Echo"<table>";
    Echo"<tr><th>RollNo</th><th>Name</th><th>Class</th></tr>";
    While($row=pg_fetch_assoc($result)){
        Echo"<tr><td>".$row['rollno']."</td><td>".$row['name']."</td><td>".$row['class']. "</td></tr>";
    }
    Echo"</table>";

    //closedatabaseconnection Pg_close($conn);
}
?>
```

Q.2).Consideranytextparagraph.Preprocessthetexttoremoveanyspecialcharactersand Digits.

Ans:

```
Importre
```

Edit with WPS Office

```
Text="Hello,#world123!Thisisasampletextparagraph.Itcontainsspecialcharactersand5 digits."

#Removespecialcharactersanddigits
Processed_text=re.sub(r'[^a-zA-Z\s]',",text)

Print(processed_text)
```

@Slip-24

Q.1)WriteaPHPscripttocreatestudent.xmlfilewhichcontainsstudentrollno,name,address, college Andcourse.Printstudentsdetailofspecificcourseintabularformatafteracceptingcourseas input. Ans:

```
<?php
//Definestudentdetails
$students=array(
    Array("rollno"=>1,"name"=>"JohnDoe","address"=>"123MainSt","college"=>"ABC College","course"=>"ComputerScience"),
    Array("rollno"=>2,"name"=>"JaneSmith","address"=>"456MainSt","college"=>"DEF College","course"=>"InformationTechnology"),
    Array("rollno"=>3,"name"=>"BobJohnson","address"=>"789MainSt","college"=>"GHI College","course"=>"BusinessAdministration"),
    Array("rollno"=>4,"name"=>"SarahLee","address"=>"101MainSt","college"=>"JKL College","course"=>"Marketing"),
    Array("rollno"=>5,"name"=>"TomBrown","address"=>"121MainSt","college"=>"MNO College","course"=>"ComputerScience") );

//CreateaSimpleXMLElementobject
$xml=newSimpleXMLElement('<students></students>');

//AddstudentelementstotheXMLobject
Foreach($studentsas$student){
```

Edit with WPS Office

```
    $student_element=$xml->addChild('student');
    $student_element->addChild('rollno',$student['rollno']); $student_element->addChild('name',$student['name']);
    $student_element->addChild('address',$student['address']);
    $student_element->addChild('college',$student['college']);
    $student_element->addChild('course',$student['course']);
}

//SavetheXMLdatatoafile
$xml->asXML('student.xml');

//GetcourseinputfromuserS
$course=isset($_POST['course'])?$_POST['course']:'';

//LoadtheXMLfile
$xml=simplexml_load_file('student.xml');
//Findstudentswithmatchingcourse
$filtered_students=$xml->xpath("//student[course='$course']");

//Printtableofmatchingstudents
Echo"<tableborder='1'>";
Echo"<tr><th>Roll No</th><th>Name</th><th>Address</th><th>College</th><th>Course</th></tr>";
Foreach($filtered_studentsas$student){
    Echo"<tr>";
    Echo"<td>{$student->rollno}</td>"; Echo"<td>{$student->name}</td>";
    Echo"<td>{$student->address}</td>";
    Echo"<td>{$student->college}</td>";
    Echo"<td>{$student->course}</td>";
    Echo"</tr>";
}
Echo"</table>";
?>
```

Edit with WPS Office

Q.2)Considerthefollowingdataset:
https://www.kaggle.com/datasets/datasnaek/youtubenew?select=INvideos.csv

WriteaPythonscriptforthefollowing: i.

Readthedatasetandperformdatacleaningoperationsonit. ii.

ii.Findthetotalviews,totallikes,totaldislikesandcommentcount.

Ans:

```
Importpandasaspd

#Readthedataset
Df=pd.read_csv('INvideos.csv')

#Dropthecolumnsthatarenotrequired
Df=df.drop(['video_id','trending_date','channel_title','category_id','publish_time','tags',
'thumbnail_link','comments_disabled','ratings_disabled','video_error_or_removed'],axis=1)

#Convertthedatatypeof'views','likes','dislikes',and'comment_count'tointeger
Df[['views','likes','dislikes','comment_count']]=df[['views','likes','dislikes', 'comment_count']].astype(int)

#Findthetotalviews,likes,dislikes,andcommentcount
Total_views=df['views'].sum()
Total_likes=df['likes'].sum()
Total_dislikes=df['dislikes'].sum()
Total_comments=df['comment_count'].sum()

Print('TotalViews:',total_views)
Print('TotalLikes:',total_likes)
Print('TotalDislikes:',total_dislikes)
Print('TotalComments:',total_comments)
@Slip-25
```

Q.1)Writeascripttocreate"cricket.xml"filewithmultipleelementsasshownbelow:

```
<CricketTeam>
```

Edit with WPS Office

```
<Teamcountry="Australia">
<player>____</player>
<runs>_____</runs>
<wicket>____</wicket>
</Team>
</CricketTeam>
```

Writeascripttoaddmultipleelementsin"cricket.xml"fileofcategory,country="India".

Ans:

```
<?php
//CreateanewDOMdocument
$doc=newDOMDocument();

//Createtherootelement
$cricketTeam=$doc->createElement("CricketTeam");

//CreatethefirsteamelementforAustralia
$teamAustralia=$doc->createElement("Team");
$teamAustralia->setAttribute("country","Australia");

//Createtheplayerelementandsetitsvalue
$player1=$doc->createElement("player","SteveSmith");
$teamAustralia->appendChild($player1);
//Createtherunselementandsetitsvalue
$runs1=$doc->createElement("runs","7090");
$teamAustralia->appendChild($runs1);

//Createthewicketelementandsetitsvalue
$wicket1=$doc->createElement("wicket","17");
$teamAustralia->appendChild($wicket1);

//Appendtheteamelementtotherootelement $cricketTeam->appendChild($teamAustralia);
```

Edit with WPS Office

```
//Createthesecondteamelementforlndia
$teamIndia=$doc->createElement("Team"); $teamIndia->setAttribute("country","India");


//Createtheplayerelementandsetitsvalue
$player2=$doc->createElement("player","ViratKohli");
$teamIndia->appendChild($player2);

//Createtherunselementandsetitsvalue
$runs2=$doc->createElement("runs","12169");
$teamIndia->appendChild($runs2);

//Createthewicketelementandsetitsvalue
$wicket2=$doc->createElement("wicket","4"); $teamIndia->appendChild($wicket2);

//Createthecategoryelementandsetitsvalue
$category=$doc->createElement("category","Captain"); $teamIndia->appendChild($category);

//Appendtheteamelementtotherootelement $cricketTeam->appendChild($teamIndia);

//Appendtherootelementtothedocument $doc->appendChild($cricketTeam);

//SavetheXMLfile
$doc->save("cricket.xml");

Echo"Elementsaddedsuccessfully!";
?>
```

Q.2)Considerthefollowingdataset:https://www.kaggle.com/datasets/seungguini/youtubecommentsfor-covid19-relatedvideos?select=covid_2021_1.csv WriteaPythonscriptforthefollowing: i.

Edit with WPS Office

Readthedatasetandperformdatacleaningoperationsonit. ii.

ii.Tokenizethecommentsinwords.Iii.Performsentimentanalysisandfindthepercentageof positive,negativeandneutralcomments..

Ans:

```
Importpandasaspd
Importnltk
Fromnltk.sentiment.vaderimportSentimentIntensityAnalyzer

#readthedataset
Df=pd.read_csv('covid_2021_1.csv')

#removenullvaluesandduplicates
Df.dropna(inplace=True)
Df.drop_duplicates(subset='Comment',inplace=True)

#tokenizecommentsinwords
Nltk.download('punkt')
Df['tokens']=df['Comment'].apply(nltk.word_tokenize)

#performsentimentanalysis
Nltk.download('vader_lexicon')
Sia=SentimentIntensityAnalyzer()
Df['sentiment']=df['Comment'].apply(lambdax:sia.polarity_scores(x)['compound'])

#calculatepercentageofpositive,negative,andneutralcomments
Total_comments=len(df)
Positive_comments=len(df[df['sentiment']>0])
Negative_comments=len(df[df['sentiment']<0])
Neutral_comments=len(df[df['sentiment']==0])
```

Edit with WPS Office

```
Positive_percentage=(positive_comments/total_comments)*100
Negative_percentage=(negative_comments/total_comments)*100
Neutral_percentage=(neutral_comments/total_comments)*100

#printtheresults
Print('TotalComments:',total_comments)
Print('PositiveComments:',positive_comments,'(',positive_percentage,'%)')
Print('NegativeComments:',negative_comments,'(',negative_percentage,'%)')
Print('NeutralComments:',neutral_comments,'(',neutral_percentage,'%)')
```

@Slip-26

Q.1)CreateemployeetableasfollowsEMP(eno,ename,designation,salary).WriteAjax programto Selecttheemployeesnameandprintheselectedemployee'sdetails.

Ans:

Htmlfile

```
<selectid="employee-list">
  <optionvalue="">Selectanemployee</option>
  <!—Populatethisdropdownwithemployeenamesusing PHP
</select>

<divid="employee-details">
  <!—Employeedetailswillbedisplayedhere
</div>
```

Ajaxfile

```
$(document).ready(function(){
 //Addeventlistenertotheselectdropdown
 $('#employee-list').change(function(){
  VarselectedEmployee=$(this).val();
  //MakeanAJAXrequesttofetchemployeedetails
  $.ajax({ url:'empdetails.php', type:'POST',
    data:{employeeName:selectedEmployee}, dataType:'json',
    success:function(response){
      //ParsetheJSONresponseanddisplayemployeedetails
      VardetailsHtml='EmployeeName:'+response.ename+'<br>'+
                                        'Designation:'+response.designation+'<br>'+
                'Salary:'+response.salary;
      $('#employee-details').html(detailsHtml);
    },
    Error:function(xhr,status,error){ Console.log('Error:',error);
    }
  });
 });
});
```

Phpfileasempdetails.php

```
<?php
//Establishdatabaseconnection
$conn=pg_connect("host=localhostdbname=database_nameuser=username password=password");
If(!$conn){
  Die('Connectionfailed:'.pg_last_error());
}

//GettheselectedemployeenamefromAJAXrequest
$employeeName=$_POST['employeeName'];

//QuerytheEMPtablefortheDetailsoftheselectedemployee
$sql="SELECT*FROMEMPWHEREename='$employeeName'"; $result=pg_query($conn,$sql);

If(pg_num_rows($result)>0){
  //BuildaJSONobjectwithemployeedetails
  $employee=pg_fetch_assoc($result);
  $response=array(
    'ename'=>$employee['ename'],
    'designation'=>$employee['designation'],
    'salary'=>$employee['salary']
  );
  Echojson_encode($response);
}else{
  Echo"Employeenotfound";
}

//Closedatabaseconnection
Pg_close($conn);
?>
```

Q.2)Considertextparagraph."""Helloall,WelcometoPythonProgrammingAcademy.Python ProgrammingAcademyisaniceplatformtolearnnewprogrammingskills.Itisdifficulttoget enrolled InthisAcademy."""Preprocessthetexttoremoveanyspecialcharactersanddigits.Generate the Summaryusingextractivesummarizationprocess.Q.

Ans:

```
Importre
Fromnltk.tokenizeimportsent_tokenize
Fromsklearn.feature_extraction.textimportTfidfVectorizer
Fromsklearn.metrics.pairwiseimportcosine_similarity

#Texttosummarize
Text="Helloall,WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyis aniceplatformtolearnnewprogrammingskills.ItisdifficulttogetenrolledinthisAcademy."

#Preprocessthetexttoremovespecialcharactersanddigits Preprocessed_text=re.sub(r'[^a-zA-Z\s]',",text)

#Tokenizethepreprocessedtextintosentences
Sentences=sent_tokenize(preprocessed_text)

#Calculatetheimportancescoreofeachsentenceusing TF-IDF
Vectorizer=TfidfVectorizer()
Tfidf_matrix=vectorizer.fit_transform(sentences)
Similarity_matrix=cosine_similarity(tfidf_matrix)

#SelecttopNsentencesbasedontheirimportancescore
N=2
Top_sentences=sorted(range(len(similarity_matrix[-1])),key=lambdai:similarity_matrix[-1][i])[-N:]

#Concatenatethetopsentencestoformthesummary
Summary="
Foriintop_sentences:
    Summary+=sentences[i]+"

Print(summary)
```

@Slip-27

Q.1)CreatewebApplicationthatcontainsVotersdetailsandcheckpropervalidationfor(name, Age,andnationality),asNameshouldbeinuppercaselettersonly,Ageshouldnotbelessthan 18yrsandNationalityshouldbeIndian.(useHTML-AJAX-PHP).

Ans:

Htmlfile

```
<!DOCTYPEhtml>
<html>
<head>
        <title>VoterDetails</title>
        <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>
</head> <body>

        <h2>VoterDetails</h2>
        <formid="voterForm">
                <labelfor="name">Name:</label>
                <inputtype="text"id="name"name="name"required><br><br> <labelfor="age">Age:</label>

                <inputtype="number"id="age"name="age"required><br><br>
                <labelfor="nationality">Nationality:</label>
                <inputtype="text"id="nationality"name="nationality"required><br><br>
                <inputtype="submit"value="Submit">
        </form>
        <divid="response"></div> <script>

                $(document).ready(function(){
                        $('#voterForm').submit(function(event){
                                        Event.preventDefault();
                                Varname=$('#name').val().toUpperCase();
                                        Varage=$('#age').val();
                                Varnationality=$('#nationality').val();
                                $.ajax({ url:'voter.php', method:'POST',
                                        data:{name:name,age:age,nationality:nationality},
                                        success:function(response){

                                                $('#response').html(response);
                                        }
                                });
                        });
                });
        </script>
</body>
```

```
</html>

Voter.phpfile

<?php
$name=$_POST['name'];
$age=$_POST['age'];
$nationality=$_POST['nationality'];

If(preg_match('/[^A-Z]/',$name)){
        Echo'Nameshouldbeinuppercaselettersonly.';
}elseif($age<18){
        Echo'Ageshouldnotbelessthan18years.';
}elseif(strcasecmp($nationality,'Indian')!=0){ Echo'Nationalityshouldbelndian.';

}else{
        Echo'Validationsuccessful.Voterdetails:<br>Name:'.$name.'<br>Age: '.$age.'<br>Nationality:'.$nationality;
}
?>
```

Q.2)Createyourowntransactionsdatasetandapplytheaboveprocessonyourdataset Ans:

```
Importrandom
Importcsv

#Generaterandomtransactiondata
Transactions=[]
Foriinrange(1,101):
    Transaction_id=i
    Transaction_date=f"2022-05-{random.randint(1,31):02d}"
    Customer_id=random.randint(1,10)
    Item_id=random.choice(["A","B","C"])
```

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```
    Item_price=round(random.uniform(10.0,100.0),2)
    Quantity=random.randint(1,10)
    Transactions.append([transaction_id,transaction_date,customer_id,item_id,item_price, quantity])

#SavethedatatoaCSVfile
Withopen('transactions.csv','w',newline='')ascsvfile:
    Writer=csv.writer(csvfile)
    Writer.writerow(["TransactionID","TransactionDate","CustomerID","ItemID","ItemPrice",
"Quantity"])
    Fortransactionintransactions: Writer.writerow(transaction)


Importpandasaspd

#ReadtheCSVfileintoaPandasDataFrame Df=pd.read_csv('transactions.csv')


#Convertthe"ItemPrice"columntonumerictype Df['ItemPrice']=pd.to_numeric(df['ItemPrice'])


#Calculatethesalesamountforeachtransaction
Df['Sales']=df['ItemPrice']*df['Quantity'] #Groupthetransactionsbycustomer IDandcalculatethetotalsalesforeachcustomer
Total_sales=df.groupby('CustomerID')['Sales'].sum().reset_index()


#Printtheresults Print(total_sales)



@Slip-28


Q.1)WriteaPHPscriptusingAJAXconcept,tocheckusernameandpasswordarevalidor Invalid(use
Databasetostoreusernameandpassword).

Ans:
```

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```
HtmlFile


<!DOCTYPEhtml>
<html>
<head>
        <title>Login</title>
        <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script> <script>

                $(document).ready(function(){
                        $("#login-form").submit(function(event){
                                Event.preventDefault();
                                        Varusername=$("#username").val();
                                        Varpassword=$("#password").val();
                                $.ajax({ url:'check_login.php', type:'post',
                                        data:{username:username,password:password},
                                        success:function(response){ if(response=="valid"){
                                        window.location.href="dashboard.php";
//redirecttodashboard
                                                }
                                                Else{
                                                        Alert("Invalidusernameorpassword");
                                                }
                                }
                                });
                        });
                });
        </script>
</head> <body>

        <h2>Login</h2>
        <formid="login-form"method="post">
                <label>Username:</label>
                <inputtype="text"name="username"id="username"><br><br>
                <label>Password:</label>
```

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```
                <inputtype="password"name="password"id="password"><br><br>
                <inputtype="submit"value="Login">
        </form>
</body>
</html>



Phpfileascheck_login.php


<?php
//Establishdatabaseconnection
$conn=mysqli_connect('localhost','username','password','database_name');
If(!$conn){
  Die('Connectionfailed:'.mysqli_connect_error());
}

//GetusernameandpasswordfromAJAXrequest
$username=$_POST['username'];
$password=$_POST['password'];

//Querytheuserstablefortheenteredusernameandpassword
$sql="SELECT*FROMusersWHEREusername='$username'ANDpassword='$password'";
$result=mysqli_query($conn,$sql);

If(mysqli_num_rows($result)>0){
  Echo"valid";
}else{
  Echo"invalid";
}

//Closedatabaseconnection
Mysqli_close($conn);
?>
```

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```
Q.2)Buildasimplelinearregressionmodelfor CarDataset.

Ans:


Fromsklearn.linear_modelimportLinearRegression


Mileage=[[10],[20],[30],[40],[50],[60],[70],[80]] Price=[24,19,17,13,10,7,5,2]


Reg=LinearRegression().fit(mileage,price)


Print('Intercept:',reg.intercept_)
Print('Coefficient:',reg.coef_[0])


New_mileage=[[25],[45],[65]]
Predicted_price=reg.predict(new_mileage)


Print('Predictedprices:',predicted_price)



@Slip-29


Q.1)WriteaPHPscriptforthefollowing:Designaformtoacceptanumberfromtheuser.
Performtheoperationsandshowtheresults.
1)FibonacciSeries.
2)Tofindsumofthedigitsofthatnumber.
(Usetheconceptofselfprocessingpage.)
Ans:


<!DOCTYPEhtml>
<html>
<head>
        <title>NumberOperations</title>
```

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```
</head> <body>

        <h1>NumberOperations</h1>
        <?php
        //definevariablesandsettoemptyvalues $num=$op="";


        If($_SERVER["REQUEST_METHOD"]=="POST"){
                $num=test_input($_POST["num"]);
                $op=test_input($_POST["op"]);


                //performoperationbasedonuser'schoice
                Switch($op){
                        Case"fib":
                                $result=fibonacci($num);
                                Echo"<p>TheFibonacciseriesof$numnumbersis:$result</p>"; Break; Case"sum":

                                        $result=sumOfDigits($num);
                                Echo"<p>Thesumofdigitsin$numis:$result</p>"; Break; Default:
                                                Echo"<p>Invalidoperationselected</p>";
                }
        }

        Functiontest_input($data){
                $data=trim($data);
                $data=stripslashes($data);
                $data=htmlspecialchars($data);
                Return$data;
        }

        Functionfibonacci($num){
                $first=0;
                $second=1; $result="";
```

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```
                For($i=0;$i<$num;$i++){
                        $result.=$first."";
                        $third=$first+$second;
                        $first=$second;
                        $second=$third;
                }

                Return$result;
        }

        FunctionsumOfDigits($num){
                $sum=0;
                While($num>0){
                                        $digit=$num%10;
                        $sum+=$digit;
                                        $num=(int)($num/10);
                }

                Return$sum;
        }
        ?>


        <formmethod="post"action="<?phpecho htmlspecialchars($_SERVER["PHP_SELF"]);?>">
                <labelfor="num">Enteranumber:</label>
                <inputtype="number"name="num"id="num"required>
                <br><br>
                <labelfor="op">Selectanoperation:</label>
                <selectname="op"id="op"required>
                        <optionvalue="">--Select--</option>
                        <optionvalue="fib">FibonacciSeries</option>
                        <optionvalue="sum">SumofDigits</option>
                </select>
                <br><br>
```

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```
                <inputtype="submit"value="Submit">
        </form>
</body>
</html>



Q.2)Buildalogisticregressionmodelfor StudentScoreDataset.
Ans:


#Importnecessarylibraries
Importpandasaspd
Fromsklearn.linear_modelimportLogisticRegression
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.metricsimportaccuracy_score


#Loadthedataset
Data=pd.read_csv('student_scores.csv')


#Splitthedataintoinputandoutputvariables
X=data.iloc[:,:-1].values
Y=data.iloc[:,-1].values


#Splitthedataintotrainingandtestingsets
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2,random_state=0)


#Createthelogisticregressionmodelandfitittothetrainingdata
Classifier=LogisticRegression() Classifier.fit(X_train,y_train)


#Makepredictionsonthetestingset Y_pred=classifier.predict(X_test)


#Evaluatethemodel'saccuracy
Accuracy=accuracy_score(y_test,y_pred)
```

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```
Print("Accuracy:",accuracy)
@Slip-30


Q.1)CreateaXMLfilewhichgivesdetailsofbooksavailablein"Bookstore"fromfollowing Categories.

1)Yoga
2)Story
3)Technical
Andelementsineachcategoryareinthefollowingformat
<Book>
<Book_Title>
----------</Book_Title>
<Book_Author>----------</Book_Author>
<Book_Price>
----------</Book_Price>
</Book>
Savethefileas"Bookcategory.xml"
.


Ans:


<?xmlve<?xmlversion="1.0"encoding="UTF-8"?>
<Bookstore>
  <Yoga>
    <Book>
      <Book_Title>LightonYoga</Book_Title>
      <Book_Author>B.K.S.Iyengar</Book_Author>
      <Book_Price>20.99</Book_Price>
    </Book>
    <Book>
      <Book_Title>TheYogaBible</Book_Title>
      <Book_Author>ChristinaBrown</Book_Author>
      <Book_Price>15.50</Book_Price>
```

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```
    </Book>
  </Yoga>
  <Story>
    <Book>
      <Book_Title>TheAlchemist</Book_Title>
      <Book_Author>PauloCoelho</Book_Author>
      <Book_Price>12.99</Book_Price>
    </Book>
    <Book>
      <Book_Title>TheDaVinciCode</Book_Title>
      <Book_Author>DanBrown</Book_Author>
      <Book_Price>14.75</Book_Price>
    </Book>
  </Story>
  <Technical>
    <Book>
      <Book_Title>PythonforDataScienceHandbook</Book_Title>
      <Book_Author>JakeVanderPlas</Book_Author>
      <Book_Price>28.99</Book_Price>
    </Book>
    <Book>
      <Book_Title>CrackingtheCodingInterview</Book_Title>
      <Book_Author>GayleLaakmannMcDowell</Book_Author> <Book_Price>23.50</Book_Price>
    </Book>
  </Technical>
</Bookstore>
```

Q.2)Createthedataset.transactions=[['eggs','milk','bread'],['eggs','apple'],['milk','bread'], ['apple', 'milk'],['milk','apple','bread']].

Convertthecategoricalvaluesintonumericformat.Applytheapriorialgorithmontheabove datasetto Generatethefrequentitemsetsandassociationrules.

Ans:

```
Transactions=[['eggs','milk','bread'],['eggs','apple'],['milk','bread'],['apple','milk'],['milk', 'apple','bread']]

#Createadictionarytomapitemstouniquenumericvalues Item_to_num={'eggs':1,'milk':2,'bread':3,'apple':4}

#Convertthecategoricalvaluesinthedatasettonumericvalues
Numeric_transactions=[]
Fortransactionintransactions:
    Numeric_transaction=[item_to_num[item]foritemintransaction]
    Numeric_transactions.append(numeric_transaction)

Print(numeric_transactions) Frommlxtend.frequent_patternsimportapriori,association_rules

#Generatefrequentitemsetswithaminimumsupportof0.4
Frequent_itemsets=apriori(numeric_transactions,min_support=0.4,use_colnames=True)

#Generateassociationruleswithaminimumconfidenceof0.7
Rules=association_rules(frequent_itemsets,metric="confidence",min_threshold=0.7)

Print(frequent_itemsets)
Print(rules)
```

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